

# Interference

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	(route adj. (ATM near12 packet\$1)). clm.	USPAT	OR	OFF	2005/08/08 11:15
L2	5	1 and "370"/\$.ccls.	USPAT	OR	OFF	2005/08/08 11:15
L3	3	2 and 370/392,395.1,401.ccls.	USPAT	OR	OFF	2005/08/08 11:16
L4	0	3 and (memory near12 integral near20 receiver)	USPAT	OR	OFF	2005/08/08 11:19
L5	0	3 and (output near5 subset same packet\$1)	USPAT	OR	OFF	2005/08/08 11:19
L6	7	"370"/\$.ccls. and (output near5 subset same packet\$1).clm.	USPAT	OR	OFF	2005/08/08 11:19
L7	0	6 and (switch with receiver same rout\$3 near20 subset)	USPAT	OR	OFF	2005/08/08 11:20

# Dialing DataStar

[options](#)
[logoff](#)
[feedback](#)
[help](#)
[databases](#)
[search  
page](#)
[titles](#)

## Document

Select the documents you wish to save or order by clicking the box next to the document, or click the link above the document to order directly.

[save](#)

 locally as: 

 search strategy: 
[previous  
documents](#)
[next  
documents](#)
[order](#)
☒ **document 8 of 9** [Order Document](#)
**INSPEC - 1969 to date (INZZ)**
**Accession number & update**

4054905, B9202-6150C-037; 920000.

**Title**

 The Christmas-tree switch: an **output** queuing space-division fast **packet** switch based on interleaving distribution and concentration functions.

**Author(s)**
[Wang-W;](#) [Tobagi-F-A.](#)
**Author affiliation**

Dept of Electr Eng, Stanford Univ, CA, USA.

**Source**

IEEE INFOCOM '91. The Conference on Computer Communications. Proceedings. Tenth Annual Joint Conference of the IEEE Computer and Communications Societies. Networking in the 90s (Cat. No.91CH2979-3), Bal Harbour, FL, USA, 7-11 April 1991, p.163-70 vol.1.

Sponsors: IEEE.

Published: IEEE, New York, NY, USA, 1991, 3 vol. xx+1515 pp.

**ISSN**

ISBN: 0-87942-694-2, CCCC: CH2979-3/91/0000-0163 (\$01.00).

**Publication year**

1991.

**Language**

EN.

**Publication type**

CPP Conference Paper.

**Treatment codes**

T Theoretical or Mathematical.

**Abstract**

A self-routing space-division fast **packet** switch architecture is proposed which achieves **output** queuing with a reduced number of internal paths ( $O(N)$ ). The switch architecture is a multi-level binary tree in which each branch constitutes a group of paths that are shared by all the packets destined to a **subset** of **output** ports. The reduction in the number of internal paths is obtained by interleaving the **packet** distribution and **packet** concentration functions throughout the switch fabric. **Packet** loss may occur at each level of the tree and is dependent on the degree of concentration exercised at that level. Owing to the binary tree structure of the switching fabric, a simple mathematical analysis is performed in order to determine the concentration parameters appropriate for each level. Several implementation architectures based on sorting networks are described. (7 refs).

**Descriptors**

packet-switching; queueing-theory; switching-theory; trees-mathematics.

**Keywords**

**packet** loss; Christmas tree switch; **output** queuing; interleaving distribution; concentration functions; self routing; space division fast **packet** switch architecture; internal paths; multi level binary tree; **packet** concentration; switch fabric; sorting networks.

**Classification codes**

B6150C (Switching theory).  
B6230 (Switching centres and equipment).  
B6150J (Queueing systems).

COPYRIGHT BY Inst. of Electrical Engineers, Stevenage, UK

<input type="button" value="save"/>	locally as: <input type="text" value="PDF document"/>	<input type="button" value="search strategy: do not include the search strategy"/>
<input type="button" value="previous documents"/>	<input type="button" value="next documents"/>	<input type="button" value="order"/>

Top - News & FAQs - Dialog

© 2005 Dialog

**Dial · g DataStar**[options](#)[logout](#)[feedback](#)[help](#)[databases](#)[easy search](#)**Advanced Search: INSPEC - 1969 to date (INZZ)**[limit](#)

Search history:

No.	Database	Search term	Info added since	Results	
1	INZZ	label AND ATM AND packets	unrestricted	42	<a href="#">show titles</a>
2	INZZ	ATM ADJ near5 ADJ packets SAME unmodified	unrestricted	0	-
3	INZZ	ATM ADJ near5 ADJ packets SAME unmodified	unrestricted	0	-
4	INZZ	output SAME subset SAME packet	unrestricted	9	<a href="#">show titles</a>

[hide](#) | [delete all search steps...](#) | [delete individual search steps...](#)Enter your search term(s): [Search tips](#) ☐ Thesaurus mapping



 Information added since:  or: 
[search](#)

Select special search terms from the following list(s):

- ☒ Publication year
- ☒ Classification codes A: Physics, 0-1
- ☒ Classification codes A: Physics, 2-3
- ☒ Classification codes A: Physics, 4-5
- ☒ Classification codes A: Physics, 6
- ☒ Classification codes A: Physics, 7
- ☒ Classification codes A: Physics, 8
- ☒ Classification codes A: Physics, 9
- ☒ Classification codes B: Electrical & Electronics, 0-5
- ☒ Classification codes B: Electrical & Electronics, 6-9
- ☒ Classification codes C: Computer & Control
- ☒ Classification codes D: Information Technology

- ➔ Classification codes E: Manufacturing & Production
- ➔ Treatment codes
- ➔ INSPEC sub-file
- ➔ Language of publication
- ➔ Publication types

Top - News & FAQs - Dialog

© **2005** Dialog